Docket No.: VE14.10
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Dale L. Bartholomew et al.

Confirmation No.: 5034

Application No.: 09/144,635

Art Unit: 2616

Filed: August 31, 1998

Examiner: C. Y. Ng

For: SELECTIVE BANDWIDTH CONNECTIVITY THROUGH NETWORK LINE CARDS

APPEAL BRIEF

MS APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is filed pursuant to 37 C.F.R. § 41.37 in furtherance of the Notice of Appeal filed in the above-identified application on September 14, 2007, and appeals the decision of the primary Examiner in the Office Action dated June 14, 2007 ("Final Office Action"). This application was filed August 31, 1998.

The fees required under § 41.20(b)(2) are addressed in the accompanying TRANSMITTAL OF APPEAL BRIEF.

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I. REAL PARTY IN INTEREST

The real party in interest of the present application, solely for purposes of identifying and avoiding potential conflicts of interest by board members due to working in matters in which the member has a financial interest, is Verizon Communications Inc. and its subsidiary companies, which currently include Verizon Business Global, LLC (formerly MCI, LLC) and Cellco Partnership (doing business as Verizon Wireless, and which includes as a minority partner affiliates of Vodafone Group Plc). Verizon Communications Inc. or one of its subsidiary companies is an assignee of record of the present application.

II. RELATED APPEALS AND INTERFERENCES

Applicants (hereinafter "Appellants") are not aware of any related appeals or interferences that would affect the Board's decision on the current appeal.

III. STATUS OF CLAIMS

Claims 1-61, reproduced as an Appendix to this Appeal Brief, are pending and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

Appellants did not make, and the Examiner did not enter, any amendments to the application subsequent to final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The presently claimed invention includes various methods, systems, and computer programs. The following is a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, as required by 37 C.F.R. § 41.37(c)(1)(v). Further, pursuant to 37 C.F.R. § 41.37(c)(1)(v), every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, is identified and the structure, material, or acts described in the specification as corresponding to each claimed function is set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. However, it is to be understood that portions of the specification not cited herein may further explain and clarify the recited means. In general, the following explanation is not intended to be used to construe the claims, which are believed to speak for themselves, nor do Appellants intend the following explanation to modify or add any claim elements, or to constitute a disclaimer of any equivalents to which the claims would otherwise be entitled, nor is any discussion of certain preferred embodiments herein intended to disclaim other possible embodiments.

The following summary of the presently claimed subject matter indicates certain portions of the specification (including the drawings) that provide examples of embodiments of elements of the claimed subject matter. It is to be understood that other portions of the specification not cited herein may also provide examples of embodiments of elements of the claimed subject matter. It is also to be understood that the indicated examples are merely examples, and the scope of the claimed subject matter includes alternative embodiments and equivalents thereof. References herein to the specification are thus intended to be exemplary and not limiting.

A. Claim 1

Claim 1 recites a method comprising requesting from a customer premises terminal [via][1] a local link to a line unit and telephone network switch in a switched telephone network

[1] Appellants' note that the word "via" is not present in claim 1 as presently pending, but that, from context and from recitations of other claims, it is clear that the word should be present. Appellants will seek to amend claim 1 to insert the word "via" following this Appeal.

a communication path to a destination. (Specification, page 14, line 27 – page 15, line 1; Figure 3.)

The method of claim 1 further comprises detecting, via a monitor, that the requesting step does not seek conversion in said line unit. (Specification, page 15, line 20 – page 16, line 12; Figure 3.)

The method of claim 1 further comprises connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network. (Specification, page 18, line 5 – page 19, line 3.)

B. Claim 14

Claim 14 depends from claim 1 and recites signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step. (Specification, page 19, line 5 – page 20, line 7.)

C. Claim 18

Claim 18 recites a method comprising requesting from a customer premises terminal via a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination. (Specification, page 14, line 27 – page 15, line 1; Figure 3.)

The method of claim 18 further comprises detecting, via a monitor, that the request seeks bandwidth in excess of that available through said line unit. (Specification, page 15, line 20 – page 16, line 12.)

The method of claim 18 further comprises connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network. (Specification, page 18, line 5 – page 19, line 3.)

D. Claim 27

Claim 27 recites a method comprising receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network. (Specification, page 14, line 27 – page 15, line 1; Figure 3.)

The method of claim 27 further comprises making a determination, via a monitor, regarding a pre-established characteristic of said signal. (Specification, page 15, line 20 – page 16, line 12.)

The method of claim 27 further comprises responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device. (Specification, page 18, line 5 – page 19, line 3.)

E. Claim 37

Claim 37 recites a communications network comprising a switched telecommunications network comprising trunked together program controlled switches connected to subscriber premises by local links and line units connecting said local links to said switches, said line units including cross-point switches and converters performing digital coding and decoding (CODECs). (Specification, page 13, lines 15-20.)

The communications network of claim 37 further comprises said line units having monitors detecting signals from said customer premises having a pre-established characteristic. (Specification, page 15, line 20 – page 16, line 12.)

The communications network of claim 37 further comprises said line units having ports connected to said cross-point switches, said ports having connections to a wide band data switch connected to a data network, wherein when a monitor in one line unit detects signals from one subscriber premises having said pre-established characteristics, the cross-point switches, in the one line unit, switches signals through from the link to the one subscriber premises to one of said ports to said wide band data switch. (Specification, page 21, line 22 – page 22 , line 11; Figure 3.)

F. Claim 41

Claim 41 recites a line unit for a switched telecommunications network comprising trunked together program controlled switches connected to subscriber premises by local links connected to the line unit. (Specification, page 6, line 21 – page 7, line 8.)

The line unit of claim 41 comprises a line concentrator network for connection to a plurality of local links, said concentrator network including switches, and a high bandwidth port and customer interface hardware. (Specification, page 8, lines 1-16.)

The line unit of claim 41 further comprises a converter for converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate. (Specification, page 13, lines 15-20.)

The line unit of claim 41 further comprises a monitor, for detecting a pre-designated signal on one of the plurality of local links and providing an output signal to said concentrator network to cause said concentrator network to provide a connection to said port for signals on the one link. (Specification, page 21, line 22 – page 22 , line 11; Figure 3.)

G. Claim 46

Claim 46 recites a line unit for selective connection of a local link to a digital switch of a telephone network and a broadband data network, the line unit comprising a switch for connection to the local link, the switch comprising a first port for a narrowband communication and a second port for connection to the broadband data network. (Specification, page 6, line 21 – page 7, line 8.)

The line unit of claim 46 further comprises a monitor means for detecting a request for a broadband service and in response controlling the switch to connect the local link to the second port. (Specification, page 21, line 22 – page 22 , line 11; Figure 3.)

H. Claim 48

Claim 48 recites a line unit for selective connection of a local link to a digital switch of a telephone network and a broadband data network, the line unit comprising a switch for connection to the local link, the switch comprising a first port for a narrowband communication and a second port for connection to the broadband data network. (Specification, page 6, line 21 – page 7, line 8.)

The line unit of claim 48 further comprises a channel circuit, coupled to the first port, for channeling signals for communication via the local link and a predetermined digital rate channel corresponding to the narrowband communication. (Specification, page 13, lines 2-20.)

The line unit of claim 48 further comprises a monitor for coupling to the local link to detect a broadband service request, and in response, control the switch to connect the local link to the second port. (Specification, page 21, line 22 – page 22 , line 11; Figure 3.)

I. Claim 53

Claim 53 recites a method comprising requesting from a customer premises terminal [via][2] a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination. (Specification, page 14, line 27 – page 15, line 1; Figure 3.)

The method of claim 53 further comprises detecting, via a monitor, that the requesting step does not seek conversion in said line unit. (Specification, page 15, line 20 – page 16, line 12.)

The method of claim 53 further comprises connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network. (Specification, page 18, line 5 – page 19, line 3.)

The method of claim 53 further comprises signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step. (Specification, page 19, line 5 – page 20, line 7.)

J. Claim 56

Claim 56 recites a method comprising receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network. (Specification, page 14, line 27 – page 15, line 1.)

The method of claim 56 further comprises making a determination, via a monitor, regarding a pre-established characteristic of said signal. (Specification, page 15, line 20 – page 16, line 12.)

The method of claim 56 further comprises responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device, wherein said solid state switching comprises cross-point switching, wherein said cross point switching is performed in a line unit in said telecommunications network, wherein said cross-

[2] Appellants' note that the word "via" is not present in claim 53 as presently pending, but that, from context and from recitations of other claims, it is clear that the word should be present. Appellants will seek to amend claim 1 to insert the word "via" following this Appeal.

point switching directs said signal away from a two-way digital/analog converter in said line unit having predetermined narrowband digital bit-rate capabilities. (Specification, page 18, line 5 – page 19, line 3.)

K. Claim 59

Claim 59 recites a method comprising receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network. (Specification, page 14, line 27 – page 15, line 1.)

The method of claim 59 further comprises making a determination, via a monitor, regarding a pre-established characteristic of said signal. (Specification, page 15, line 20 – page 16, line 12.)

The method of claim 59 further comprises responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device, wherein said digital signal processing is performed in a processor separate from said wide band edge device, wherein the processor performing said digital signal processing is associated with a line unit through a portion of which said signal is conducted. (Specification, page 18, line 5 – page 19, line 3.)

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. That claims 1, 5-7, 10-13, 17, 18, 20, 22-27, 33-35, 46, 59, and 60 are anticipated under 35 U.S.C. § 102(e) by United States Patent No. 6,314,102 ("Czerwiec").

2. That claims 14 and 53 are unpatentable under Section 103 over Czerwiec in view of United States Patent No. 6,083,280 ("Eitel").

3. That claims 36, 41-45, 47, 48, and 56-58 are unpatentable under Section 103 over Czerwiec in view of United States Patent No. 4,143,242 ("Horiki").

VII. ARGUMENT

A. The Law

With respect to Section 102 rejections, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *E.g., Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). *See also* M.P.E.P. § 2131.

With respect to Section 103 rejections, the Examiner has a burden of stating a prima facie case of obviousness. A prima facie case of obviousness has historically required that:

> First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP, § 2143 (citing In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

So long as the first requirement for a prima facie case of obviousness is not rigidly applied, requiring the Examiner to show some reason for combining prior art references is consistent with the United States Supreme Court's recent decision in KSR International Co. v. Teleflex, Inc., 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). In KSR, the Supreme Court stated that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." (Id. at 1739, 82 USPQ2d at 1395.) Additionally the court stated that

> It can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

(Id. at 1741, 82 USPQ2d at 1396.) The Court further explained that

> What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under §103. One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known

> problem for which there was an obvious solution encompassed by the patent's claims.

(Id. at 1742, 82 USPQ2d at 1397.) Accordingly, the Court made clear that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." (Id. at 1731, 82 USPQ2d at 1389.) In summary, KSR plainly does not disturb the well-settled proposition that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); M.P.E.P § 2141.02.

B. Ground of Rejection No. 1.

1. Independent Claims 1, 18, 25, 27, 37, 41, 46, 48, 53, 54, 56, and 59 are not anticipated by Czerwiec and all of Appellants' claims are therefore patentable.

Czerwiec does not teach or suggest a "monitor," as is recited by each of Appellants' independent claims. Independent claim 1, discussed in this Section B1 as representative of all of Appellants' independent claims, recites, among other elements, "detecting, via a monitor, that the requesting step does not seek conversion in said line unit." The Examiner asserted that the recited monitor is anticipated by Czerwiec based on the Examiner's allegation that "junction 66 in Fig. 2 decides whether the request is passed to low pass filter 40 or high pass filter 38." (Office Action, page 2.) However, Czerwiec in reality does not include any decision-making point as alleged by the Examiner. Czerwiec in fact teaches no more than the use of "frequency division multiplexing, i.e., joining the POTS service on the line 50 at a low frequency with the high-bandwidth services provided on the line 58." (Czerwiec, 11: 23-26.) Czerwiec does not teach or suggest "monitoring" or a "monitor" at all.

Specifically, Czerwiec discloses at most an Asymmetric Digital Subscriber Line (ASDL) shelf 34 that includes high pass filter 38, a low pass filter 40, a network termination (NT) card 60, and a line termination (LT) card 62. (E.g., Czerwiec, Figure 2.) However, Czerwiec does not teach or suggest a monitor integrated with a line unit/card. (See Applicants' Specification, Figure 3, especially elements 21 and 22; page 15, line 20 – page 19, line 3.) In particular, Czerwiec's junction node 66 does not in any way teach or suggest the "monitor" recited in Applicant's claims.

In fact, Czerwiec discloses nothing more than combining filtered signals, and does not teach or suggest "monitoring" at all. Czerwiec clearly states that

> The ATM switch 48 provides ATM formatted data on a line 58 to a network termination (NT) card 60 which is, in turn, connected to a plurality of ADSL-line termination (LT) cards such as the card 62 which includes the highpass filter 38 for providing the ADSL signal on a line 64 to a junction node 66 for combination with the normal telephony signals provided by the lowpass filter 40. The node 66 thus forms a means for frequency division multiplexing, i.e., joining the POTS service on the line 50 at a low frequency with the high bandwidth services provided on the line 58 and converted to ADSL by the LT 62 at a higher frequency for passing through the filter 38 and on to the line 64 for combination with the telephony service at the node 66 of the twisted copper pair 36.

(Czerwiec, 11: 15-29; emphasis added.) In other words, Czerwiec's junction node 66 is not a monitoring or decision point of any kind, but rather is a point at which signals from a low pass filter are combined with signals from a high pass filter. A junction node is plainly not a "monitor," and therefore Czerwiec does not anticipate Applicants' claims.

The present Section 102 rejection of Appellants' claims should be reversed for at least this reason. Further, for at least the reasons stated in this Section, all of Appellants' independent claims, and therefore all of Appellants' claims, are patentable over Czerwiec.

2. Independent Claims 1 and 54: "detecting . . . that the requesting step does not seek conversion in said line unit"

Claims 1 and 54 each recite "detecting, via a monitor, that the requesting step does not seek conversion in said line unit." As noted above, Czerwiec does not teach or suggest the recited monitor in any way at all. Further, Czerwiec does not teach or suggest any "detecting . . . that the requesting step does not seek conversion in said line unit." Therefore, the rejection of claims 1 and 54 should be reversed for this additional reason.

The Examiner alleged that Czerwiec's disclosure of subscriber equipment including a "lowpass filter . . . responsive to a telephony signal occupying a baseband position in a frequency division multiplex signal also having a wideband signal occupying a position above baseband" reads on the recitation "that the requesting step does not seek conversion in said line unit." (Final Office Action, page 2; citing Czerwiec, 4: 37-50.) In fact, Czerwiec plainly does not teach or suggest any "detecting" related to whether a request does or does not "seek

conversion in said line unit." In fact, Czerwiec does not appear to include any teaching or suggestion relating to "conversion" at all. At most, Czerwiec teaches filtering a signal to obtain a portion of the signal for use in voice communications (Czerwiec, 4: 43-46), and further providing "a digital line subscriber modem . . . for providing [the] wideband" portion of the frequency division multiplex signal. (Czerwiec, 4: 48.50.) In other words, Czerwiec teaches at most filtering a signal and does not include any teaching or suggestion of detecting that a request does or does not "seek conversion in said line unit."

In sum, Czerwiec does not include any teaching or suggestion relating to "conversion in said the wine unit," much less "detecting . . . that the requesting step does not seek conversion in said line unit." Therefore, for at least this further reason, the rejection of claims 1, 53, and 54, as well as claims 2-17 depending from claim 1, and claim 55 depending from claim 54, should be reversed.

3. Independent Claim 18: "detecting . . . that the request seeks bandwidth in excess of that available through said line unit"

Claim 18 recites "detecting, via a monitor, that the request seeks bandwidth in excess of that available through said line unit." As noted above, Czerwiec does not teach or suggest the recited monitor in any way at all. Further, Czerwiec does not teach or suggest any "detecting . . . that the request seeks bandwidth in excess of that available through said line unit." In fact, Czerwiec does not appear to include any teaching or suggestion at all concerning monitoring a volume of bandwidth. Therefore, the rejection of claims 1, 53, and 54 should be reversed for this additional reason.

The Examiner cited the portion of Czerwiec discussed above with respect to claims 1, 53, and 54 with respect to the recitation in claim 18 of "detecting . . . that the request seeks bandwidth in excess of that available through said line unit." As noted above, Czerwiec teaches at most filtering a signal to identify voice communications and digital communications, but does not in any way teach or suggest the recited "monitor." Such disclosure does not in any way teach or suggest monitoring, much less monitoring a volume of bandwidth or detecting that a "request seeks bandwidth in excess of" a given amount of bandwidth, much less, "bandwidth in excess of that available through said line unit."

For at least these further reasons, claim 18, as well as claims 19-26 depending therefrom, are patentable over Czerwiec. Therefore, the rejection of these claims should be reversed at least for these further reasons.

B. Ground of Rejection No. 2: Claims 14 and 53 are not obvious over Czerwiec and allegedly admitted prior art.

Independent claim 53, like independent claim 1, recites "detecting, via a monitor, that the requesting step does not seek conversion in said line unit. Accordingly, claim 53 is patentable over Czerwiec alone or in combination with any other prior art for any of the independent reasons set forth above regarding claim 1.

Further, claim 14 (which depends from claim 1 and is patentable for at least that reason) and claim 53 each recite "signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step." The Examiner acknowledged that Czerwiec does not disclose this recitation. However, to compensate for the acknowledged deficiencies of Czerwiec, the Examiner asserted that

> Eitel discloses that when a call request is first received by a local telephone switch by the calling party, a billing file is created based upon factors such as the service rate of the calling party, the identity of the called party, time of day, etc. [Once] the billing file is created, a controller of the local switch can determine how to establish the connection to the called party. Refer to Column 1, lines 43-60.

(Final Office Action, page 6.) However, assuming arguendo that the Examiner correctly characterized Eitel, simply having a controller determine how to establish a connection after a billing file is created does not read on claims 14 and 53, which require "using said entry for billing for the communications path set up in response to said requesting step."

In fact, Eitel teaches away from the foregoing recitation of claims 14 and 53 because Eitel teaches that, after "a billing file is created, a controller . . . may determine how to establish a connection with the called party" by referring not to the billing file, but by referring "to the called number." (Eitel, 1: 56-59.) Thus, one of ordinary skill in the art, upon reading Eitel, would have seen no reason for "using said entry for billing for the communications path set up in response to said requesting step" because Eitel teaches establishing a connection by referring to a call number. At a minimum, Eitel includes no

teaching or suggestion of using a billing entry "for the communications path set up in response to said requesting step" as recited by each of claims 14 and 53.

Accordingly, claim 14 is separately patentable at least for the foregoing reasons. Further, the foregoing reasons provide further independent support for the patentability of claim 53. Therefore, the rejections of each of claims 14 and 53 should be reversed.

C. Ground of Rejection No. 3: Claims 36, 41-45, 47, 48, and 56-58 are not obvious over Czerwiec and Horiki.

Independent claims 41, 48, and 56 are patentable over the combination of Czerwiec and any other prior art reference at least for the reasons stated above with respect to claim 1. Further, dependent claims 36, 42-45, 47, and 57-58 are patentable over the alleged combination of Czerwiec and Horiki at least by reason of these claims' dependence from patentable independent claims, as stated above. Accordingly, the rejections of these claims should be reversed for at least these reasons.

Further, claim 41 recites "a converter for converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate." The Examiner acknowledged that Czerwiec does not disclose this recitation. However, the Examiner cited Horiki as allegedly compensating for the acknowledged deficiencies of Czerwiec. According to the Examiner, Horiki discloses that "ordinary voice switching is sent on to a narrowband digital rate channel of a predetermined data rate of 8 kHz PCM." (Final Office Action, page 9.) However, it is unclear what the Examiner is referring to by "a predetermined data rate of 8 kHz PCM" and therefore the Examiner's rejection should be reversed for at least this reason. The term "PCM" in Horiki plainly refers to "pulse code modulation," which, as described in Horiki's Abstract, involves sampling an analog signal "at a high rate," thereby producing "a high-speed sampling digital code." Thus, mere use of PCM does not teach or suggest converting signals . . . at a predetermined narrowband bit-rate." Because Horiki does not appear to teach or suggest "converting signals . . . at a predetermined narrowband bit-rate," the rejection of claim 41 should be reversed for at least this further reason.

CONCLUSION

In view of the above analysis, a reversal of the rejections of record is respectfully requested of this Honorable Board. It is believed that any fees associated with the filing of this paper are identified in an accompanying transmittal. However, if any additional fees are required, they may be charged to Deposit Account 18-0013, under Order No. 65632-0140, from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136(a) is hereby made, the fee for which should be charged against the aforementioned account.

Respectfully submitted,

Dated: November 13, 2007

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APPENDIX A – CLAIMS APPENDIX

Pursuant to 37 CFR § 41.37(c)(vii), the following listing provides a copy of the claims involved in the appeal.

1. A method comprising:

requesting from a customer premises terminal a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

detecting, via a monitor, that the requesting step does not seek conversion in said line unit;

connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network.

2. A method according to claim 1, wherein said portion of said line unit comprises a concentrator network of said line unit.

3. A method according to claim 2, wherein said converter comprises a CODEC.

4. A method according to claim 2, wherein said concentrator network includes a switching system.

5. A method according to claim 4, wherein said switching system provides hard wired switching.

6. A method according to claim 5, wherein the switching in said switching system provides hard wired switching between said terminal and said wide band data switch.

7. A method according to claim 5, wherein said switching system is connected to a digital signal processor (DSP).

8. A method according to claim 5, wherein said switching system comprises gated-diode cross point (GDX) switching.

9. A method according to claim 5, wherein said switching system comprises cross point switching.

10. A method according to claim 7, wherein said digital signal processor is indirectly associated with said line unit.

11. A method according to claim 7, wherein said digital signal processor is directly associated with said wide band data switch.

12. A method according to claim 7, wherein said digital signal processor (DSP) is integrated with said line unit.

13. A method according to claim 1, wherein said requesting step is made by emitting from said terminal a signal of a predetermined characteristic and wherein said detecting is accomplished by a detecting device associated with said line unit.

14. A method according to claim 1, further including the steps of: signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step.

15. A method according to claim 1, wherein said connecting step through a portion of said line unit around a converter therein to a wide band switch is a virtual hard wired connection.

16. A method according to claim 15, wherein said connection to said wide band network is through an Asynchronous Transfer Mode (ATM) edge device.

17. A method according to claim 1, wherein said line unit comprises a line card.

18. A method comprising:

requesting from a customer premises terminal via a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

detecting, via a monitor, that the request seeks bandwidth in excess of that available through said line unit;

connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network.

19. A method according to claim 18, wherein said portion of said line unit comprises a concentrator network of said line unit.

20. A method according to claim 19, wherein said request is made by emitting from said terminal a signal of a predetermined characteristic and wherein said detecting is accomplished by a detecting device associated with said line unit.

21. A method according to claim 19, wherein said portion of said line unit comprises a concentrator network of said line unit including a switching system.

22. A method according to claim 19, wherein said switching system provides hard wired switching.

23. A method according to claim 22, wherein the switching in said switching system provides hard wired switching between said terminal and said wide band data switch.

24. A method according to claim 23, wherein said switching system is connected to a digital signal processor (DSP).

25. A method according to claim 24, wherein said digital signal processor is indirectly associated with said line unit.

26. A method according to claim 23, wherein said digital signal processor is directly associated with said wide band data switch.

27. A method comprising:

receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network;

making a determination, via a monitor, regarding a pre-established characteristic of said signal;

responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device.

28. A method according to claim 27, wherein said solid state switching comprises cross-point switching.

29. A method according to claim 28, wherein said cross point switching is performed in a line unit in said telecommunications network.

30. A method according to claim 29, wherein said cross-point switching directs said signal away from a two-way digital/analog converter in said line unit having predetermined narrowband digital bit-rate capabilities.

31. A method according to claim 30, wherein said wide band network edge device is an Asynchronous Transfer Mode (ATM) edge device.

32. A method according to claim 31, wherein said digital signal processing occurs in said edge device.

33. A method according to claim 27, wherein said digital signal processing is performed in a processor separate from said wide band edge device.

34. A method according to claim 33, wherein the processor performing said digital signal processing is associated with a line unit through a portion of which said signal is conducted.

35. A method according to claim 34, wherein said processor performing said digital signal processing comprises a part of said line unit.

36. A method according to claim 34, wherein said digital signal processing is performed in an adaptive digital signal processor with a programmed controller providing coding and decoding functions adapted to a particular communication service requested by said signal and the physical level of signal protocol used over said local link from said customer premises.

37. A communications network comprising:

a switched telecommunications network comprising trunked together program controlled switches connected to subscriber premises by local links;

line units connecting said local links to said switches, said line units including cross-point switches and converters performing digital coding and decoding (CODECs);

said line units having monitors detecting signals from said customer premises having a pre-established characteristic;

said line units having ports connected to said cross-point switches, said ports having connections to a wide band data switch connected to a data network, wherein when a monitor in one line unit detects signals from one subscriber premises having said pre-established characteristics, the cross-point switches, in the one line unit, switches signals through from the link to the one subscriber premises to one of said ports to said wide band data switch.

38. A communications network according to claim 37, further including digital signal processors for processing the signals switched by said cross-point switches to said data network.

39. A communications network according to claim 38, wherein said digital signal processors are associated with said wide band switch to said data network.

40. A communications network according to claim 39, wherein the signals switched through said cross-point switches to said ports to said wide band data switch are hard-wired connected to said wide band data switch.

41. A line unit for a switched telecommunications network comprising trunked together program controlled switches connected to subscriber premises by local links connected to the line unit, said line unit comprising;

a line concentrator network for connection to a plurality of local links, said concentrator network including switches, and a high bandwidth port;

customer interface hardware;

a converter for converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate; and

a monitor, for detecting a pre-designated signal on one of the plurality of local links and providing an output signal to said concentrator network to cause said concentrator network to provide a connection to said port for signals on the one link.

42. A line unit according to claim 41, wherein said concentrator network comprise solid state switches.

43. A line unit according to claim 42, wherein the concentrator switches create a hard wired connection to said port for the one link.

44. A line unit according to claim 43, wherein said line unit delivers said signals on the one link to said port in unconverted format.

45. A line unit according to claim 41, including a digital signal processor with a programmed controller providing coding and decoding functions adapted to a service requested by the detected signal and the physical level protocol used over the one local link.

46. A line unit for selective connection of a local link to a digital switch of a telephone network and a broadband data network, the line unit comprising:

a switch for connection to the local link, the switch comprising a first port for a narrowband communication and a second port for connection to the broadband data network; and

a monitor means for detecting a request for a broadband service and in response controlling the switch to connect the local link to the second port.

47. A line unit as in claim 46, further comprising a channel circuit, coupled to the first port, for channeling signals for communication via the local link and a predetermined digital rate channel corresponding to the narrowband communication.

48. A line unit for selective connection of a local link to a digital switch of a telephone network and a broadband data network, the line unit comprising:

a switch for connection to the local link, the switch comprising a first port for a narrowband communication and a second port for connection to the broadband data network;

a channel circuit, coupled to the first port, for channeling signals for communication via the local link and a predetermined digital rate channel corresponding to the narrowband communication; and

a monitor for coupling to the local link to detect a broadband service request, and in response, control the switch to connect the local link to the second port.

49. A method according to claim 1, wherein the monitor includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

50. A method according to claim 18, wherein the monitor includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

51. A method according to claim 27, wherein the monitor includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

52. A line unit as in claim 46, wherein the monitor means includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

53. A method comprising:

requesting from a customer premises terminal a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

detecting, via a monitor, that the requesting step does not seek conversion in said line unit;

connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network; and

signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step.

54. A method comprising:

requesting from a customer premises terminal a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

detecting, via a monitor, that the requesting step does not seek conversion in said line unit; and

connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network, wherein said connecting step through a portion of said line unit around a converter therein to a wide band switch is a virtual hard wired connection.

55. A method according to claim 54, wherein said connection to said wide band network is through an Asynchronous Transfer Mode (ATM) edge device.

56. A method comprising:

receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network;

making a determination, via a monitor, regarding a pre-established characteristic of said signal; and

responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device, wherein said solid state switching comprises cross-point switching, wherein said cross point switching is performed in a line unit in said telecommunications network, wherein said cross-point switching directs said signal away from a two-way digital/analog converter in said line unit having predetermined narrowband digital bit-rate capabilities.

57. A method according to claim 56, wherein said wide band network edge device is an Asynchronous Transfer Mode (ATM) edge device.

58. A method according to claim 57, wherein said digital signal processing occurs in said edge device.

59. A method comprising:

receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network;

making a determination, via a monitor, regarding a pre-established characteristic of said signal; and

responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device, wherein said digital signal processing is

performed in a processor separate from said wide band edge device, wherein the processor performing said digital signal processing is associated with a line unit through a portion of which said signal is conducted.

60. A method according to claim 59, wherein said processor performing said digital signal processing comprises a part of said line unit.

61. A method according to claim 59, wherein said digital signal processing is performed in an adaptive digital signal processor with a programmed controller providing coding and decoding functions adapted to a particular communication service requested by said signal and the physical level of signal protocol used over said local link from said customer premises.

APPENDIX B – EVIDENCE APPENDIX

Not applicable – in this Appeal, Appellants do not rely on any evidence submitted pursuant to 37 CF.R.F. §§ 1.130, 1.131, or 1.132, or on any other evidence entered by the Examiner.

APPENDIX C - RELATED PROCEEDINGS APPENDIX

Not applicable – no related proceedings are referenced herein.